Algebra 1B
Unit 3 Review

Name: KEY

Multiple Choice

1) Solve: $\frac{-x}{4} > 8$

a) $x > -2$ b) $x < -2$ c) $x > -32$ d) $x < -32$ e) none of these

2) Solve: $2x + 2 > 4$

a) $x > 4$ b) $x < 4$ c) $x > 1$ d) $x < 1$ e) none of these

Solve each of the following. SHOW ALL OF YOUR WORK!!!

3) $n + 5 \geq 32$

$n \geq 27$

4) $12x < -144$

$x < -12$

5) $-13d < -65$

$d > 5$

6) $\frac{a}{-10} \leq -2$

$a \geq 20$

7) $\frac{-3}{5}x > \frac{-4}{15}$

$\frac{5}{-3} \cdot \frac{-3}{5}x > \frac{-4}{15} \cdot \frac{5}{-3}$

$x < \frac{-20}{-45}$

$x < \frac{+4}{+9}$

8) $3r - 5 \leq 7$

$3r \leq 12$

$r \leq 4$

9) $\frac{r}{8} - 5 \leq -12$

$8 \cdot \frac{r}{8} \leq -7 \cdot 8$

$r \leq -56$

10) $3(5x + 2) - 7x < 38$

$15x + 6 - 7x < 38$

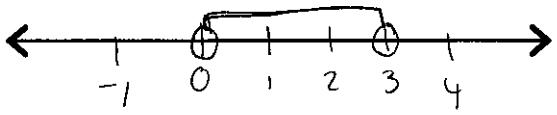
$8x + 6 < 38$

$8x < 32$

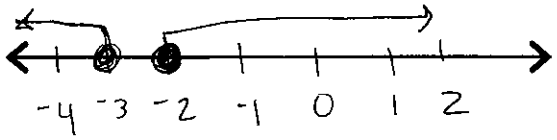
$x < 4$

Graph the solutions. Rewrite the inequalities if necessary.

11) $x > 0$ or $x < 3$

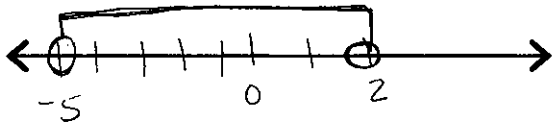


12) $x \geq -2$ or $x \leq -3$

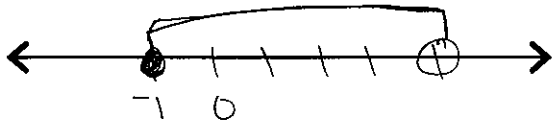


13) $3w < 6$ and $-2w < 10$

$w < 2 \quad w > -5$



14) $-8 \leq 2z - 4 < 4$



$-8 \leq 2z - 4$

$-2 \leq 2z$

$-1 \leq z$

$z \geq -1$

$2z - 4 < 4$

$2z < 8$

$z < 4$

15)

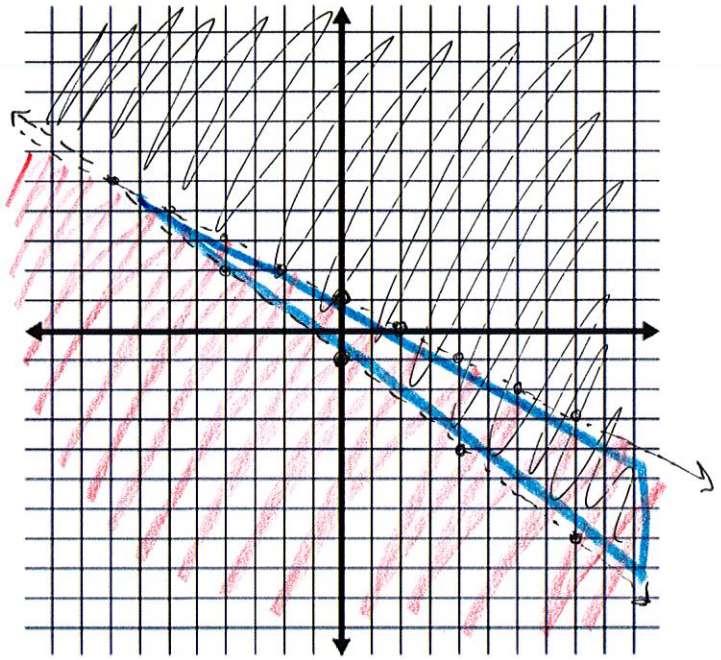
Graph the system of inequalities:

$3x + 4y > -4$

$x + 2y < 2$

$y > -1 - \frac{3}{4}x$

$y < 1 - \frac{1}{2}x$



16)

Graph the system of inequalities:

$$\begin{cases} y > 3x - 4 \\ y \leq \frac{1}{-2}x + 5 \end{cases}$$